

Probability – Odds

$$\text{Probability} = \frac{\text{success}}{\text{total}} = \frac{\text{success}}{\text{success} + \text{failure}}$$

$$\text{Odds} = \frac{\text{success}}{\text{failure}}$$

To convert probability to odds and odds to probability, we can formalize what we just did using this procedure.

1. Write the information given with its respective ratio
2. Determine the value of s and f
3. Write the ratio for the information you are looking for
4. Plug in the values of s and f

Convert the following odds to probability

- | | |
|-----------|-----------|
| 1. 2 to 5 | 2. 3 to 7 |
| 3. 1 : 1 | 4. 4 : 5 |
| 5. 4/5 | 6. 7/8 |
| 7. 1 to 2 | 8. 5 : 9 |

Convert the following probabilities to odds

- | | |
|-------------------|-------------------|
| 9. $\frac{3}{4}$ | 10. 70% |
| 11. $\frac{3}{5}$ | 12. .08 |
| 13. 7% | 14. .2 |
| 15. $\frac{5}{8}$ | 16. $\frac{2}{7}$ |